GBR

Polar Pacer®
Heart Rate Monitor

User's Manual

POLAR®
heart rate monitors

Contents

How does Polar Pacer work 5
Polar Pacer parts 5
Getting going 6
How to start heart rate measurement 7
Functions during heart rate measurement 8
See your heart rate and elapsed time 8
Illuminate the display 8
Turn the Target Zone sound signal on/off 8
Check the time of day 9
Stop the stopwatch 9
Stop heart rate measurement 9
How to recall training information 10
How to set your Target Zone 11
How to set the watch 13
Setting the alarm clock 13
Setting the time of day 15
Exercising with your Polar Heart Rate Monitor 16
General exercise recommendation 17
Intensity of exercise 17
Frequency of training 20
Mode of activity 20
Structure of an exercise session 21
References 21
Quick guide for exercising 22
Define the amount of your physical activity 22
Determine your exercise goals 24
Examples of exercise recommendations 24
Care and maintenance 26
Taking care 26
Batteries 27
Precautions 28
In a water environment 28
Interference 29
Frequently asked questions 30
Technical specifications 32
Polar books and accessories 33
Service 34
Check list 34
Sending instructions 35
Polar's service procedure 35
Limited Polar warranty 36
Disclaimer 37
Notes 38

Congratulations on purchasing the Polar Pacer Heart Rate Monitor. We are proud to assist you in achieving your personal fitness goals.

This guide will provide you with the basic information on how to exercise with your Polar Heart Rate Monitor and how to get the best benefit of its functions.

Wirelessly and continuously yours,

POLAR®

VISUAL CUES TO READ THIS GUIDE

Indicates a tip to do things faster.

Indicates important issues. Please, pay attention!

Indicates a useful tip. It is good to know these things.

▶ See also

IMPORTANT TO REMEMBER!

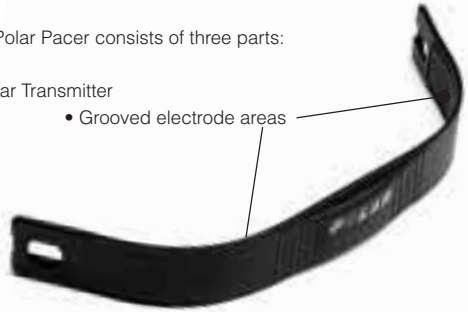
- Adjust the strap length snug enough and wet the transmitter electrodes to ensure flawless heart rate measurement.
- Do not bend or stretch the transmitter.
- Do not operate the buttons of the wrist receiver under water.
- Wash and dry your transmitter regularly after use.
- Do not store your Polar Heart Rate Monitor wet. Store it in a dry and cool place.
- Keep the Polar Heart Rate Monitor out of extreme cold and heat.

How does Polar Pacer Work

POLAR PACER PARTS

Your Polar Pacer consists of three parts:

1. Polar Transmitter
   - Grooved electrode areas



2. Elastic strap

3. Polar Pacer Wrist Receiver

1. Attach the Polar Transmitter to the elastic strap.
2. Adjust the strap length to fit snugly and comfortably.
3. Secure the strap around your chest, below the chest muscles. Lock the buckle. Check that the Polar logo is in a central upright position.

4. Pull the Transmitter off your chest and wet the grooved electrode areas on the back of it.

5. Check that the wet electrode areas are firmly against your skin.
6. Wear the Wrist Receiver as you would wear an ordinary watch.

Alternatively, if you go biking, you may attach the Wrist Receiver to a Polar Bike Mount. ▶ **Polar Products**. Keep the Wrist Receiver within the transmission range (1 metre / 3 feet).

It is recommended that you wear the Transmitter against your bare skin to ensure flawless operation. However, if you wish to wear the Transmitter over a shirt, moisten the shirt well under the electrodes.

It is important that the electrodes are wet during exercise. After exercising to preserve the electrodes and battery life:
1. Wash the Transmitter carefully with a mild soap water solution.
2. Rinse it with pure water.
3. Dry the Transmitter carefully.

How to Start Heart Rate Measurement

1. Wear the Transmitter and the Wrist Receiver as described previously.

2. Begin with the display showing time of day.

3. To start, choose from the following alternatives:

   One touch start: *In the Time mode press and hold the right button of the Receiver for 1 second.*

   Quick start: *In the Time mode, bring the Polar logo of the Receiver to the Transmitter's Polar logo and wait for a beep signal.*

   Heart rate measurement commences and heart symbol starts flashing. Stopwatch starts running in the lower line of the display. Your heart rate (in beats per minute) appears in the display in approximately 5 seconds.

4. You can now start exercising with your Polar Pacer.

Functions During Heart Rate Measurement

SEE YOUR HEART RATE AND ELAPSED TIME

1. You can see your heart rate in beats per minute. A flashing heart symbol indicates an ongoing heart rate measurement. The inner heart symbol flashes at the pace of your heart.

2. The total exercising time runs in the lower line of the display.

3. Bars will appear in the left side of the display, one bar after every ten minutes spent in the Target Zone.

4. You can hear a beep after every 30 minutes of exercise in the Target Zone.

ILLUMINATE THE DISPLAY

Press the right button briefly.

Backlight is activated for a few seconds.

TURN THE TARGET ZONE SOUND SIGNAL ON/OFF

When the Target Zone sound symbol appears in the display, you will hear an alarm sound with each heart beat if you go above the Upper Limit or below the Lower Limit of your Target Zone. Press and hold the right button to turn the Target Zone sound signal on or off.

sound signal is on

Also a flashing heart rate reading informs you of being outside your Target Zone.

CHECK THE TIME OF DAY

Whilst exercising you don't have to press any button to check the time of day momentarily. Just bring the Wrist Receiver near the Transmitter's Polar logo.

The time of day and backlight will be on for a few seconds.

STOP THE STOPWATCH

The total elapsed time is running in the lower line of the display.

1. Press the left button shortly.
   The stopwatch stops.

2. Press the left button shortly again.
   The stopwatch continues running.

You may need this function if you have to stop your exercise momentarily e.g. in traffic lights.

STOP HEART RATE MEASUREMENT

1. Press and hold the left button to stop heart rate measurement.
   Heart rate measurement stops.
   Time spent in the Target Zone appears in the upper line of the display.
   Total exercising time appears in the lower line of the display.

2. Press the left button briefly.
   Time of day appears in the display.

In case you forget to stop the heart rate measurement when ending your exercise session and taking off the Transmitter, the Wrist Receiver turns itself into Time mode if no heart rate signal is received for 5 minutes.

How to Recall Training Information

Polar Pacer provides you the following information of your last training session:

- Time spent in the Target Zone
- Total exercising time

1. When you stop heart rate measurement you will have the training information displayed.

2. To review the last training information start in the Time mode. Press the left button three times.
   Time spent in the Target Zone appears in the upper line of the display. Total exercising time appears in the lower line of the display.

3. To return to the Time mode, press the left button once.

Your last training information is in the memory of Polar Pacer until the next time you measure heart rate. When you start heart rate measurement again, your previous training information will be replaced by the new one.
Polar Pacer saves only one training file at a time.

How to Set Your Target Zone

1. Begin with the display showing time of day.

2. Press the left button to enter the Target Zone setting mode.
   The Upper Limit reading appears flashing in the display. The upper bar, indicating the Upper Limit, appears in the upper left corner of the display.

3. Press the right button to set the Upper Limit value of your personal Target Zone.
   The numbers will increase in 5 beat increments.

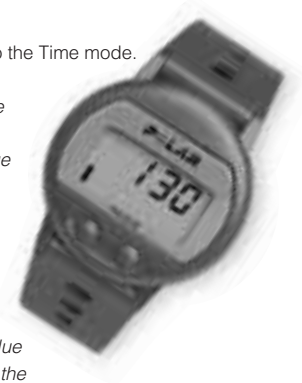
The digits run faster if you press and hold the right button. Release the button at the desired value.

4. Press the left button to lock your selection.
   The Lower Limit reading appears flashing in the display. The lower bar, indicating the Lower Limit, appears in the lower left corner of the display.

5. Press the right button to select the correct value for the Lower Limit.
   The value for the Lower Limit starts to increase in 5 beats increments.

6. Press the left button to lock your selection.
   Your last training information appears in the display.

7. Press the left button to return to the Time mode.



The Upper Limit cannot be set below the Lower Limit. When the Lower Limit value reaches the Upper Limit value, the Lower Limit will be reset to 15, the lowest possible setting.

It may be necessary to reduce the Lower Limit value first and then return to set the Upper Limit.

To return to the Time mode at any point in the setting procedure, press both buttons simultaneously.

How to Set the Watch

Polar Pacer has two watch functions: alarm clock and time of day. In the setting functions you have first the alarm clock function and thereafter the time of day function.

Start the watch settings by pressing both buttons simultaneously in the Time mode. In case you do not want to set the alarm clock, you can skip to the time of day settings by pressing the left button five times.

To return to the Time mode at any point in the watch setting procedure, and to interrupt the watch settings, press both buttons simultaneously.

You can distinguish the mode you are in from the display:
- The heart symbol will be displayed in the Time mode but not in the setting modes.
- The alarm clock function displays no seconds whereas the time of day function includes the seconds.

SETTING THE ALARM CLOCK

1. With display showing time of day, press both buttons simultaneously.
   Alarm signal symbol starts flashing.

2. Press the right button to set the alarm clock on/off.

3. Press the left button to lock your selection.
   AM/PM starts flashing.

4. Press the right button to select AM or PM for the alarm clock time. AM = before 12 o'clock, PM = after 12 o'clock.

5. Press the left button to lock your selection.
   The first digits representing the hours start flashing.

6. Press the right button to select the desired hour.

The digits run faster if you press and hold the right button. Release the button at the desired value.

7. Press the left button to lock your selection.
   The digit representing the tens of minutes starts flashing.

8. Press the right button to select the desired tens of minutes.

Left Button:
LOCK YOUR SELECTION

Right Button:
SELECT

9. Press the left button to lock your selection.
   The digit representing the minutes starts flashing.

10. Press the right button to select the desired minutes.

11. Press the left button to lock your selection.
    You enter the time of day setting mode.
    AM/PM starts flashing.

12. To return to the Time mode, press both buttons simultaneously. To set the time of day continue from Setting time of day, step 3.

When the alarm comes on it will sound for one minute. You can turn the alarm off by pressing any of the two buttons.

SETTING THE TIME OF DAY

1. In the Time mode, press both buttons simultaneously.
   You enter the alarm clock setting mode.
   Alarm symbol starts flashing.

2. Press the left button five times to skip the alarm clock setting.
   AM/PM for time of day is flashing.

3. Press the right button to select AM or PM for the time of day.

4. Press the left button to lock your selection.
   The first digits representing the hours start flashing.

5. Press the right button to select the desired hour.

The digits run faster if you press and hold the right button. Release the button at the desired value.

6. Press the left button to lock your selection.
   The digit representing the tens of minutes starts flashing.

7. Press the right button to select the desired tens of minutes.

8. Press the left button to lock your selection.
   The digit representing the minutes starts flashing.

9. Press the right button to select the desired minutes.

10. To lock your selection and to restart the seconds press the left button. You will then return to the Time mode. Alternatively, to return to the Time mode without restarting the seconds press both buttons simultaneously.

You may also use Polar Pacer as an ordinary watch without a Transmitter.

Exercising with Your Polar Heart Rate Monitor

Regular exercise helps you to sustain and improve your health and fitness, as well as feel better. Exercising has also other great benefits, you can reduce stress, learn to know your body's reactions and optimise your training time. Whether you are about to start a regular exercise program or you already do sports training, a Polar Heart Rate Monitor will help you to achieve your personal fitness goals in less time, with greater safety.

The effect of your exercise program depends on four factors:

- Intensity of exercise
- Duration of exercise
- Frequency of exercise
- Mode of activity

Exercise may include some risk, especially for those who have been sedentary. To minimise possible risks consider the following advice.

Before beginning a regular exercise program consult your doctor

- if you are over 35 years of age
- if you have not been following a regular exercise program during the past 5 years
- if you smoke
- if you have high blood pressure
- if you have high blood cholesterol
- if you have any signs or symptoms of any disease
- if you are recovering from a serious illness or a medical treatment e.g. surgery
- if you use a pacemaker or another implanted electronic device.

GENERAL EXERCISE RECOMMENDATION

American College of Sports Medicine (ACSM 1990,1995) defines a recommended exercise dose for developing and maintaining cardiovascular fitness in healthy adults as follows:

Intensity of training:	60-90% of the maximum heart rate
Duration of training:	20-60 minutes of continuous aerobic activity
Frequency of training:	3-5 days a week
Mode of activity:	Any mode which uses large muscle groups

INTENSITY OF EXERCISE

Heart rate is proved to be an excellent indicator of exercise intensity. Heart rate tells you the exertion level of your body during physical or mental loading. With the Polar Heart Rate Monitor you are able to follow the intensity of your exercise easily, keep yourself in the right heart rate Target Zone and stay motivated as you see the improvement. Changes in the heart's beating rate can be followed with a Polar Heart Rate Monitor wirelessly, continuously and ECG accurately.

Define your exercise intensity according to your target. When you exercise within the defined Target Zone, you ensure the right intensity of your workout.
Any physical activity that increases heart rate above the resting heart rate may provide health benefits, but only greater increments above resting heart rate are associated with both health and fitness benefits. This is why you should define your personal Target Zone.

If you are a beginner, sedentary or overweight, a recommended target is to exercise at light or light to moderate intensity.
At this target, the exercise is easy-paced and causes only slight breathlessness and sweating.

If you aim for improved fitness or exercise for competitive reasons your exercise intensity is moderate or heavy paced, and it causes clear breathlessness and sweating.

However, when planning your personal exercise dose, you can vary the workout intensity e.g. if there is a change in your physical condition or feelings.

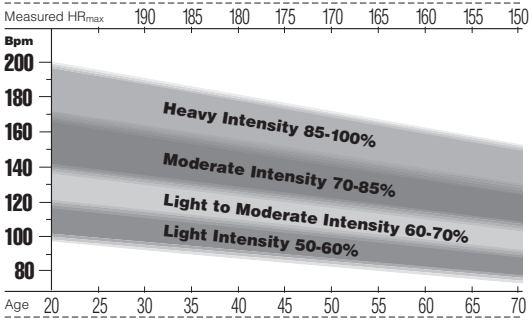
Target zones are calculated using the person's maximum heart rate as a reference. The most reliable way to determine your individual Target Zone is to have your maximum heart rate measured at an exercise stress test. For more information on an exercise stress test, consult your physiologist or doctor.

However, according to ACSM most people can estimate their maximum heart rate by the formula:

220 - Age = Maximum Heart Rate

For example a 35-year old person's Maximum Heart Rate would be: 220 - 35 = 185 beats per minute

The following Target Range Chart helps you find the right Target Zone for your needs. The percentages for the Target Zones are counted from the maximum heart rate (measured or predicted).



How to find your personal Target Zone ?

If you have had your maximum heart rate measured at an exercise stress test, use the upper axis for measured HR_{max}. This gives you the precise values for your Target Zone. In case you do not know your exact maximum heart rate, use the lower axis for age.

1. Locate one of the four intensity targets, which would be most suitable for you. Each target is shaded differently.

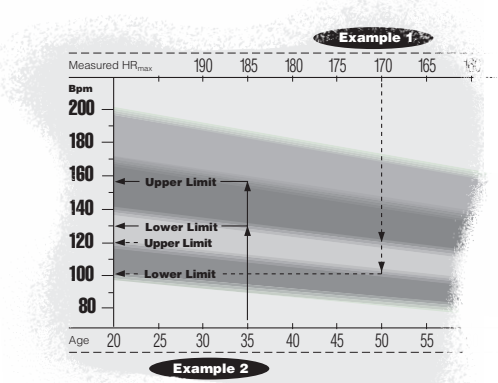
2. Locate your age on the down axis or your measured maximum heart rate on the upper axis.

3. Read up from your age / read down from your measured maximum heart rate to the target you chose.

4. Draw a straight line from the upper edge of the target to the left and you will find the Upper Limit of your Target Zone.

5. Then draw another straight line from the lower edge of the target to the left and you will find the Lower Limit for your Target Zone.

6. You have now found your Target Zone. As you exercise, make sure that your heart rate stays within your personal Target Zone (between the Lower and the Upper Limit) to get the maximum benefit from your workout.



See the examples above:

1. A person, whose maximum heart rate has been measured at an exercise stress test. His HR_{max} is 170 bpm and his goal is to exercise for health at Light to Moderate Intensity. The Target Zone limits are 102-119 bpm.

2. A person, who does not know his HR_{max}. He is 35 years old and his goal is to improve fitness at Moderate Intensity. The Target Zone limits are 130 - 157 bpm.

FREQUENCY OF TRAINING

It is recommended that you exercise 3-5 times a week. You can improve your performance by increasing the frequency of training. Remember to let your body recover properly between the training sessions.

MODE OF ACTIVITY

Select activities that you enjoy and vary your exercise modes. To build a solid base for your aerobic conditioning, choose continuous activities such as jogging, running, walking, swimming, bicycling, rowing and cross-country skiing.

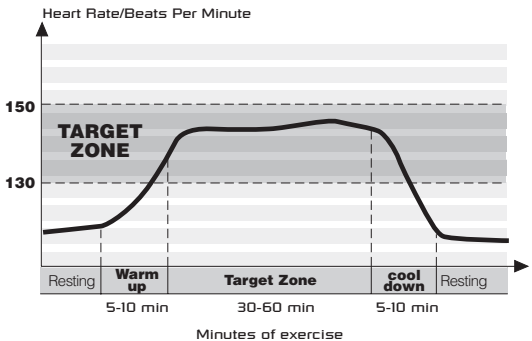
To improve your muscular endurance and strength as well as flexibility choose intermittent activities such as tennis, badminton, football, ice hockey, resistance training and gymnastics.

STRUCTURE OF AN EXERCISE SESSION

Begin each workout slowly and give your body a chance to warm up for at least for 5 minutes so that your heart rate is below the selected Target Zone. Gradually increase the intensity of your exercise until you are in your Target Zone.

Remain in your Target Zone for the desired time. After that, gradually reduce the intensity of your exercise and let your heart rate fall below the Target Zone with a 5 minute cool-down period.

For an example of an exercise session for a 35-year-old person with 'Improved Fitness' as a target, please see the following chart.



REFERENCES

American College of Sports Medicine. Position Stand. The Recommended Quantity and Quality of Exercise for Developing and Maintaining Cardiorespiratory and Muscular Fitness in Healthy Adults. Med Sci Sports Exerc 22: 265-274, 1990.

American College of Sports Medicine. ACSM's Guidelines for Exercise Testing and Prescription. Williams & Wilkins, 1995.

Jackson, A.S., Blair, S.N., Mahar, M.T., Wier, L.T., Ross, R.M. and Stuteville, J.E. Prediction of functional aerobic capacity without exercise testing. Med Sci Sports Exerc 22: 863-870, 1990.

Quick guide for exercising

Before beginning, you should ask yourself two key questions:
- What is the amount of my physical activity at the moment?
- What are my goals?

The following steps help you answer the two questions, get the most out of your Polar Heart Rate Monitor, and achieve your personal exercise goals.

1. DEFINE THE AMOUNT OF YOUR PHYSICAL ACTIVITY

You may have a clear understanding of your present physical condition. In this case you can move to the next step to specify your goals. You can also define the amount of your physical activity by answering the questionnaire which is modified from the "Code for Physical Activity" developed by NASA/Johnson Space Center (Jackson et al. 1990).

The questionnaire is an easy and quick way to define whether you are a beginner, a moderate exerciser, an active exerciser or a serious exerciser. It is recommended to review the questionnaire every 1-2 months and revise if the amount of your physical activity has changed.

Which alternative best describes your general **activity level** for the **previous month?**

A beginner who does not participate regularly in programmed recreational sports or heavy physical activity.

❑ Avoid walking or exertion whenever possible.

❑ Walk for pleasure, routinely use stairs, occasionally exercise sufficiently to cause heavy breathing or perspiration.

A moderate exerciser who participates regularly in recreation or work requiring modest physical activity, such as golf, gymnastics or yard work.

❑ 10 to 60 min. a week

❑ Over one hour a week

An active exerciser who participates regularly in heavy physical exercise such as jogging, swimming, cycling or engages in vigorous aerobic activity type exercise such as tennis.

❑ Run less than 1 mile a week or spend less than 30 min. a week in comparable physical activity.

❑ Run 1 to 5 miles a week or spend 30 to 60 min. a week in comparable physical activity.

A serious exerciser who participates in a regimented workout program consisting of heavy physical exercise.

❑ Run 5 to 10 miles a week or spend 1 to 3 hours a week in comparable physical activity.

❑ Run over 10 miles a week or spend over 3 hours a week in comparable physical activity.

2. DETERMINE YOUR EXERCISE GOALS

It is easier to stay motivated when you determine your reason for exercising and establish a goal. That is why you should determine your personal goal very clearly. Your exercise goal may be one of these:

- Get used to regular physical exercise
- Lose weight
- Maintain or improve health
- Maintain or improve fitness
- Compete with yourself
- Achieve competitive results

3. EXAMPLES OF EXERCISE RECOMMENDATIONS

Recommendation for a **beginner**:

Goal	Duration in Target Zone	Times a week	Intensity
Improve fitness and well-being	15-40 min. at a time	2-4 1	Light Light to moderate

Recommendation for a **moderate exerciser**:

Goal	Duration in Target Zone	Times a week	Intensity
Maintain fitness and well-being	20-40 min. at a time	2-4 1	Light to moderate Moderate
Improve fitness and lose weight	30-60 min. at a time	2-4 2	Light to moderate Moderate

Recommendation for an **active exerciser**:

Goal	Duration in Target Zone	Times a week	Intensity
Maintain fitness and well-being	30-60 min. at a time	2-4 1	Moderate Heavy
Improve fitness	60-90 min. at a time	2-4 2	Moderate Heavy

Recommendation for a **serious exerciser**: Have your maximum heart rate measured and find your personal Target Zone to get the best benefit of your training sessions.
For more information on heart rate monitoring ▶ **Polar products/Polar books and booklets**.

Care and Maintenance

Your Polar Heart Rate Monitor is a high-tech instrument of superior design and workmanship and should be treated with care. The suggestions below will help you fulfill the warranty obligations and enjoy this product for many years to come.

TAKING CARE OF YOUR POLAR HEART RATE MONITOR

- Wash the Polar Transmitter regularly after use with a mild soap and water solution. Rinse with pure water. Dry carefully after washing.
- Never store the Polar Transmitter wet. Sweat and moisture can keep its electrodes wet and the Polar Transmitter activated, which shortens the battery life.
- Store your Polar Heart Rate Monitor in a cool and dry place.
- Do not bend or stretch the Polar Transmitter. This may damage the electrodes.
- Keep your Polar Heart Rate Monitor out of extreme cold (below -10 ^{O}C / 14 ^{O}F) and heat (above 50 ^{O}C / 122 ^{O}F).
- Do not expose the Polar Heart Rate Monitor to direct sunlight for extended periods, such as by leaving it in a car.

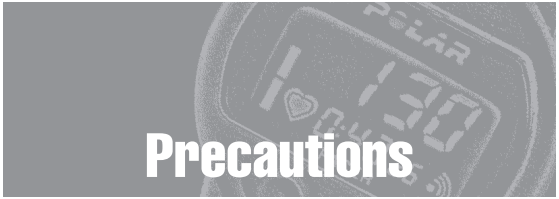
BATTERIES

POLAR TRANSMITTER
The estimated average battery life of the Polar Transmitter is 2500 hours of use. Contact your distributor/dealer for a Transmitter replacement.
▶ See **Service** for detailed instructions.

Polar recycles used Transmitters.

POLAR WRIST RECEIVER
The estimated average battery life of the Polar Wrist Receiver is 1 year in normal use (2h/day, 7 days a week). However, because the battery is inserted at the factory, the actual life of your first battery once in your possession may be less than the estimated battery life. Note also that an excessive use of the backlight and the beep signal will shorten the battery life more rapidly.

Do not open the Polar Wrist Receiver yourself. To ensure the water resistance properties and the use of qualified components, the Wrist Receiver battery should be replaced only by a person authorised by Polar Electro Oy. At the same time a full periodic check of the Polar Heart Rate Monitor will be done. ▶ **Service** for detailed instructions.



Precautions

USING A POLAR HEART RATE MONITOR IN A WATER ENVIRONMENT

Polar Heart Rate Monitors are water resistant to 20 meters. To maintain the water resistance, do not operate the buttons of the Polar Wrist Receiver under water. The pressure may cause the Receiver to leak.

Heart rate measurement in a water environment is technically demanding for the following reasons:

- Pool water with a high chlorine content and seawater may be very conductive and therefore short circuit the ECG signal so that it cannot be detected by the Transmitter unit.
- Jumping into the water or strenuous muscle movement during competitive swimming may cause water resistance that shifts the Transmitter on the body to a location where it is not possible to pick up ECG signal.
- The ECG signal strength varies depending on the individual's tissue composition and the percentage of people who have problems in heart rate measuring is considerably higher in a water environment than in other use.

POLAR HEART RATE MONITOR AND INTERFERENCE

ELECTROMAGNETIC INTERFERENCE
Disturbances may occur near high voltage power lines, televisions, cars, bike computers, some exercise equipment or cellular phones.

CROSSTALK
The non-coded Polar Wrist Receiver picks up transmitter signals within 1 metre/ 3 feet. Therefore, when you are using your Polar Heart Rate Monitor make sure no other transmitter is within that range. Signals from more than one transmitter picked up simultaneously can cause an incorrect readout.

EXERCISE EQUIPMENT
Several pieces of exercise equipment with electronic or electrical components such as LED displays, motors and electrical brakes may cause interfering stray signals. To try to tackle these problems, relocate the Polar Wrist Receiver as follows:

1. Remove the Polar Transmitter from your chest and use the exercise equipment as you would normally.
2. Move the Receiver around until you find an area in which it displays no stray reading or flashing of the heart symbol. Interference is often worst right in front of the display panel of the equipment, while the left or right side of the display is relatively free of disturbance.
3. Put the Transmitter back on the chest and keep the Receiver in this interference free area.
4. If the Polar Heart Rate Monitor still does not work with the exercise equipment, this piece of equipment may be too noisy electrically for wireless heart rate measurement.

Notice for persons with pacemakers
Persons who have a pacemaker use the Polar Heart Rate Monitor at their own risk. Before starting use, we always recommend an exercise test under doctor's supervision. The test is to ensure the safety and reliability of the simultaneous use of the pacemaker and the heart rate monitor.

Frequently Asked Questions

WHAT SHOULD I DO IF...

...THERE IS NO HEART RATE READING?

1. Check that the elastic strap is snug enough.
2. Check that the electrodes of the Polar Transmitter are moistened and that you are wearing it as instructed.
3. Check that you have kept the Polar Transmitter clean. ▶ **Care and maintenance**.
4. Check that there are no sources of electromagnetic radiation in the close vicinity of the Polar Wrist Receiver, such as TV sets, cellular phones, CRT monitors etc. ▶ **Precautions**.
5. Have you had a cardiac event which may have altered your ECG waveform? In this case consult your physician.

...HEART SYMBOL FLASHES IRREGULARLY?

1. Check that your Polar Wrist Receiver is inside the transmission range and not further that 1 metre/ 3 feet from the Polar Transmitter you are wearing.
2. Check that the elastic strap has not become loose during exercise.
3. Make sure that the electrodes of the Transmitter are moistened.
4. Make sure that there is no other heart rate transmitter within the reception range (1 metre/ 3 feet). ▶ **Precautions/ Crosstalk**.
5. Cardiac arrythmia may cause irregular readings. In this case consult your physician.

...HEART RATE READING BECOMES ERRATIC OR EXTREMELY HIGH (OVER 200 BPM)?

You may have come within range of strong electromagnetic signals which cause erratic readings on the Receiver display. Check your surroundings and move further away from the source of disturbance. ▶ **Precautions**.

...THERE ARE NO REACTIONS TO ANY BUTTONS?

Reset the Polar Heart Rate Monitor. Resetting clears all memory values and settings will return to the default settings.

1. Wear the Polar Transmitter as described earlier in this manual.
2. Simultaneously press both buttons and hold the Polar logo of the Wrist Receiver to the Polar logo of the Polar Transmitter.
   Display becomes full of digits.
3. Press either the right or the left button once.
   You hear a long beep.
   Polar Pacer enters the Time mode.

...THE DISPLAY IS BLANK OR FADING?

Usually the first sign of a discharged battery is disappearing of the digits when using the backlight. Have the batteries checked. ▶ **Service**.

...THE BATTERY OF THE WRIST RECEIVER MUST BE REPLACED?

We recommend having all service done by authorised Polar Service. Especially during the warranty period this is necessary to keep the warranty of the whole Polar Heart Rate Monitor valid. Polar Service will test your Wrist Receiver for water resistance after battery replacement and make a full periodic check of the complete Polar Heart Rate Monitor. ▶ **Care and Maintenance/Batteries** and **Service**.

Technical Specifications

Polar Heart Rate Monitor is designed to indicate the level of physiological strain and intensity in sports and exercise. No other use is intended or implied. Heart rate is displayed as number of heart beats per minute (bpm).

POLAR TRANSMITTER

Battery type:	Built-in Lithium Cell
Battery life:	Average 2500 hours of use
Operating temperature:	14 °F to 122 °F / -10 °C to +50 °C

POLAR WRIST RECEIVER

Battery type:	CR 2032
Battery life:	Average 1 year (2h/day, 7 days/week)
Operating temperature:	14 °F to 122 °F / -10 °C to +50 °C
Water resistancy:	to 20 metres
Accuracy of heart rate measurement:	±1% or ±1 beats per minute, whichever larger, definition applies to steady state conditions

DEFAULT SETTINGS

Upper Limit:	100
Lower Limit:	60
Time of day:	10.00 AM

Polar books and accessories

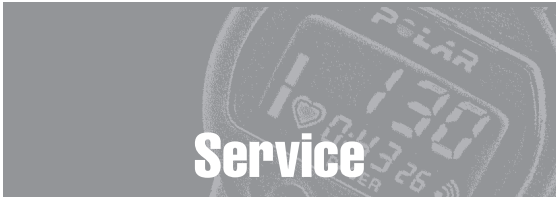
POLAR BOOKS AND BOOKLETS

Roy Benson, MPE:	Precision Running
Dr. Matthew Brick:	Precision Multisport
Edmund R. Burke, Ph.D.:	Precision Cycling
Neil Craig	Scientific Heart Rate Training
Sally Edwards:	The Heart Rate Monitor Book
Mark Fenton and Dave McGovern:	Precision Walking
Ute Haas, M.Sc., Tarja Suomi, M.Sc. and Dr. Raija Laukkanen, Ph.D.:	Precision Aerobics
Dr. Peter J.G.M. Janssen:	Training, Lactate, Pulse Rate
Dr. Katriina Kukkonen-Harjula, MD and Dr. Raija Laukkanen, Ph.D.	Precision Weight Management
Dr. Raija Laukkanen, Ph.D	Research Index
Yvonne Lin:	Precision Sports Aerobics
Dr. James M. Rippe:	Target Your Fitness and Weight Management Goals
Dr. Jamer M. Rippe:	The Polar Fat Free and Fit Forever Program

POLAR ACCESSORIES

- Polar Bike Mount for all bikes and Polar Heart Rate Monitors
- Elastic straps of different lengths
- Extra Transmitter for other family members
- Polar Heart Bra for women
- Test handle for groups and trainers

Ask your local dealer or distributor for more details.



Service

To ensure continuous improvement of Polar products, please complete and mail the enclosed Warranty Registration Card within two weeks of the date of purchase.

Polar Service will help you get the most out of your Polar Heart Rate Monitor. Should your Polar Heart Rate Monitor need service, please follow the instructions:

CHECK LIST

Before you return your Polar Heart Rate Monitor for service, please check the following:

1. IS THE TRANSMITTER BEING WORN CORRECTLY?
   The Polar logo should be right side up and the Transmitter flat against the skin. The elastic strap should be adjusted for a snug and comfortable fit.

2. ARE THE ELECTRODES MOIST ON THE TRANSMITTER?
   It is important that the electrodes are wet during the heart rate measurement.

3. IS THE TRANSMITTER CLEAN?
   Regular washing with mild soap and water solution and thorough dry afterwards will ensure that good conductivity remains.

4. ARE YOU HAVING DISTURBANCES CAUSED BY OTHER PEOPLE WITH HEART RATE MONITORS OR EXERCISE EQUIPMENT?
   ▶ **Precautions/Polar Heart Rate Monitor and interference** for more details.

SENDING INSTRUCTIONS

1. Pack the product carefully to avoid further damage.
2. Include all the parts of the Polar Heart Rate Monitor. A full periodic check will be done on the whole product.
3. Include proof of purchase (a receipt or its photocopy) if the product is under warranty.
4. Include a detailed description of the problem. Use the return sheet of the Customer Care Charter.
5. Include your name, return address and daytime telephone number.
6. Ship postage prepaid to your dealer or distributor. For contact details see the Customer Care Charter or the warranty card.

POLAR'S SERVICE PROCEDURE

Any service is recommended to be done by authorised Polar service personnel. Our standard test and check procedure will be performed to all Polar Heart Rate Monitors. The test includes following elements:

POLAR TRANSMITTER
1. Visual inspection
2. Check of the transmission range
3. Check of electrode conductivity
4. Wash and clean if necessary

POLAR WRIST RECEIVER
1. Visual inspection
2. Check of battery voltage
3. Check and cleaning of case contacts
4. Re-assembly, including seal renewal if necessary
5. Water resistancy test
6. Operational test

Water resistancy cannot be guaranteed after unauthorised service.

Limited Polar Warranty

- Polar Electro Oy warrants to the original consumer/ purchaser of this heart rate monitor that the product will be free from defects in material or workmanship for one year from the date of purchase. Please keep the receipt which is your proof of purchase!

- Warranty does not cover receiver battery, damage due to misuse, abuse, accidents or negligence of the precautions; improper maintenance, commercial use, cracked or broken cases.

- Warranty does not cover damage or consequential damage caused by service not authorised by Polar Electro.

- During the warranty period the product will be either repaired or replaced at an authorised service centre free of charge.

- For more details, please see the warranty card.

Copyright © 1997
Polar Electro Oy, FIN-90440 KEMPELE, Finland

All rights reserved. No part of this manual may be used or reproduced in any form or by any means without prior written permission of Polar Electro Oy.

Polar logotype, Polar Pacer and Polar Beat are registered trademarks of Polar Electro Oy.
Polar Vantage NV, Polar XTrainer Plus, Polar Accurex Plus, Polar Protrainer XT, Polar Protrainer NV, Polar Advantage Interface, Polar Precision Performance, Polar Interface Plus, Polar Training Advisor, Polar Fitwatch, Polar Heartwatch and Polar Favor are trademarks of Polar Electro Oy.

CE
0537

This CE marking shows compliance of this product with Directive 93/42/EEC.

Disclaimer

This product is protected by one or several of the following patents: FI 88223, BRD 4215549, FR 92.06120, GB 2257523, HK 113/1996, SG 9591671-4, US 5491474, FI 88972, FR 92.09150, GB 2258587, HK 306/1996, SG 9592117-7, US 5486818, FI 96380, US 5611346, FI 68734, BRD 3439238, GB 2149514, HK 812/1989, US 4625733.

The material in this manual is for informational purposes only. The products it describes are subject to change without prior notice, due to the manufacturer's continuous development program.

Polar Electro Oy makes no representations or warranties with respect to this manual or with respect to the products described herein. Polar Electro Oy shall not be liable for any damages, direct or incidental, consequential or special, arising out of, or related to, the use of this material or the products described herein.